Tennessee's Technology Plan

Overall Goals

1. All K-12 Tennessee public schools will use the existing* technology available to have access to the world's libraries, databases, and content through classroom, library and laboratory connections.
   Objective for SY 97-98: Every Tennessee student and teacher will have a minimum of 1 hour per week to use the Internet.

2. All students and teachers in Tennessee will develop basic skills, perform research and solve problems through the Internet and instructional software resources.
   Objective for SY 97-98: every Tennessee classroom will be wired to the Internet.

3. All teachers will be prepared and trained to use instructional technology, incorporating it effectively into the curriculum.
   Objective for SY 97-98: Every teacher will have access to modules on the Internet to facilitate his/her professional development.
   Objective for SY 98-99: Every teacher will have access to curricular modules to facilitate integrating the Internet into the curriculum.

4. Use technology to facilitate reconnecting communities to their schools.
   Objective for SY 97-98: Every Tennessee classroom wiring effort will involve volunteers and local businesses.
   Objective for SY 97-98: Many state agencies will continue to refurbish computers and train teachers.

* Existing technology includes network equipment operating in all Tennessee public schools, which provides a direct, full connection to the Internet. This network was installed in 1996.

Long Term Financing Components

1. Legislative appropriation
   (a) $10 million recurring per year designated for 21st century computers and operational network costs for FY 97.
   (b) Basic Education Program (BEP) funding formula allocating an estimated $27 million in FY 98 for technology purposes.

2. Local Education Agency match to Legislative appropriation
   Match is defined by a formula of criteria that calculates the ability to provide local support. Overall, Tennessee's legislative appropriation is 75% with a local match of 25%. This is known as the BEP formula.

3. Education is participating in a statewide network with shared costs among other state government, local government and higher education entities.

4. The network designed and purchased for Tennessee public schools is predicated on low cost/low bandwidth digital service with recurring costs that are affordable in current state and local appropriations. Annual costs are $4 million with $3 million state share and $1 million local share.

5. Professional development strategies have been designed with low cost initial implementation such that all teachers can begin to use network technology and enhance their skill and capabilities over time while using it.

6. Leveraging Other Sources

(a) Goals 2000 dollars were awarded with preference to technology-based programs that enhanced network connectivity and use of technology.
(b) School-to-Career initiative provides information including curriculum, Work Keys, best practices and career opportunities to the schools via the Internet. Grant dollars will go toward the development of a science/technology career cluster in each of the fourteen regions of the state.
(c) Private donations from business have been pledged and collected to support initial network implementation in every school in 1996. (See Public/Private Participation)
(d) Grant proposals for government and foundation funding are designed to complement the technology plan.

Public/Private Participation Components

1. Tennessee Network Information Infrastructure (TNII) is a joint planning effort across all state government departments, local government entities, public libraries, schools, and higher education to combine three existing statewide networks, and promote joint network use for all statewide connectivity.

2. Connect Tennessee Students, Inc. is a nonprofit organization created to obtain support for school network strategies from business and foundation sources. Funds have been committed by the Tennessee Association of Business, the Tennessee Business Roundtable, the Tennessee Bankers Association, Tennessee members of National Federation of Independent Business, etc., representing more than 25,000 large and small businesses in Tennessee.

3. Volunteer efforts such as NetDay 97 in Tennessee will focus on extending the existing network in each school to classrooms, incorporating parent and community volunteers to extend wiring, and business donations to support network connectivity and teacher professional development.

4. Agreements among Tennessee State Departments are furthering the availability of computers for network purposes:
   (a) The Tennessee prisons are cooperating in refurbishing obsolete equipment provided by businesses and government agencies.
   (b) Tennessee General Services is providing coordination and transportation to equitably distribute equipment and teachers are volunteering to receive training to use the equipment.
   (c) Tennessee National Guard is providing space, training and technical support and assisting teachers and schools to increase the number of operational networked computers.

Equitable Access by all Students

Access to technology requires funding for computers, network access in all areas, including rural isolated ones, low recurring costs, and equal opportunity for teacher training in using technology.

1. **Funding**: Tennessee law established a funding formula guaranteeing equitable distribution of funding for all Tennessee schools systems, whether students live in rural or urban settings or high or low economic areas. (See BEP definition)

2. **Network Access**: Digital access has been assured by Tennessee's telephone companies with a $400 million statewide investment. Building on this infrastructure, Tennessee's statewide network placed an access point in every county to assure low cost connections for any entity wanting access.

3. **Low Recurring costs**: At $30 per month per ISDN line in schools and residences, Tennessee has one of the lowest digital line costs in the country. A strategy using this capacity facilitated a modest cost for every school to connect to the Internet. Every telephone company, including independents and cooperatives, has provided digital access at these monthly rates for all schools in Tennessee.

4. **Equal Opportunity for Teacher Training:**
   (a) Using National Guard armories, located in most counties, as well as higher education entities, has facilitated making training easily and quickly accessible to all Tennessee teachers. About 45% of Tennessee's teachers now have Internet E-mail accounts, with training, and this is available to any teacher desiring one.
   (b) As of September 1997, all graduates of Tennessee teacher education institutions (public and private) are required to fulfil instructional technology requirements to receive licensure.
   (c) Plans for World Wide Web-based training are now part of the State Department of Education's training plans since all teachers now have access to the World Wide Web in their school.
   (d) Incentives for all teachers to use technology are also part of grants, awards and NetDay type volunteer activities.

Background Timeline

1991	Virtual School with Vanderbilt and Oak Ridge National Lab begins with the Tennessee Education Network (TEN)1993
1993	21st Century Classrooms program begins
1994	7500 teachers trained through Virtual School TNII proposal for a statewide network is submitted Management of TEN transitioned to Tennessee Board of Regents Virtual School receives NII award
1995	Library-Internet Telecommunications Project deployed
July 1995	Governor Don Sundquist and Commissioner of Education Jane Walters announce the ConnecTEN vision
May 1996-ongoing	95 TAPs (one per county) begin; network installation begins
June 1996	Tennessee Home Page unveiled by Governor Sundquist
July/August 1996	Armory Training for K-12 teachers
October 1996	Launch of web access in all K-12 schools

TNII (Tennessee Network Information Infrastructure)
Statewide telecommunications network designed as the seed investment by the state for providing equitable electronic access to all Tennessee citizens by leveraging assets within the existing infrastructure.

TEN (Tennessee Electronic Network)
A statewide telecommunications network for K-12 schools providing dial-in, text-based access to the Internet to K-12 teachers via shell accounts.

Library-Internet Telecommunications Project
Provided microcomputers and accessibility to the Internet for all K-12 public school libraries and media centers. 1943 librarians and media specialists were trained.

ConnecTEN
ConnecTEN is the opportunity for all 860,000 public school students in Tennessee to gain access to the world of resources available through a graphical connection to the Internet. These resources assure the opportunity to use converging technologies to connect anywhere in the world for resource gathering, problem solving, work-force preparedness and life-long learning. At a minimum, the school library in all 1,554 schools with be networked to connect to the Internet. All other computers in the school may also be connected as part of the same initiative, if they are connected on a network within the school (local area network). Using this building block approach, as more computers and a network within the school are available, they too will be connected to the world through the Internet.

BEP (Basic Education Program)
A comprehensive funding formula adopted by the Tennessee General Assembly for funding education. The BEP guarantees equitable distribution through a process called "equalization". This process divides the local share of the match among school systems based on differences in ability to raise local revenues.

21st Century Classrooms
A major initiative to bring technology to Tennessee K-12 schools, stressing self-contained desktop computers. Although this initiative did not emphasize network connectivity, it has left Tennessee schools well-positioned to take advantage of connectivity. Since 1996, this program has stressed connectivity.

GRANT PROCESS FOR TECHNOLOGY LITERACY FUND

Objectives specific to the 1997-98 School Year

1. Every Tennessee classroom will be wired to the Internet.
2. Every Tennessee student will have a minimum of 1 hour per week to use the Internet.
3. Every teacher will have access to modules on the Internet to facilitate his/her professional development.
4. Every teacher will have access to curricular modules to facilitate integrating the Internet into the curriculum.
5. Every Tennessee classroom wiring effort will involve volunteers and local businesses.
6. Many state agencies will continue to refurbish computers and train teachers.

Purpose of this grant competition

1. Every school system in the state will bring student Internet access to a minimum of 1 hour per week:
   (a) by having 1 computer available for every 25 students in each school, and
   (b) by having those computers connected to the internet through the existing ConnecTEN network and available for student access.
   Example: 100 students @ 1 hr. per week requires 100 hours of available computer time. If there are 4 computers available 6 hours per school day and 5 hours per week, this allows 100 hours for student access (1 hr. per week) and 20 hours for administrative access per week.

2. Every teacher will have access to curricular modules available on the Web for use in the classroom.

Emphasis

Since Tennessee, through legislative authorization and local school system match, has, in the last several years, spent $145,000,000 providing funds for over 15,000 21st century computers, the priority for funding will be to enhance these to support connectivity by the Internet through:

1. equipment hubs (Ethernet hubs) and wiring to create a physical network connection among existing computers in the schools;
2. upgrades to existing computers to provide sufficient memory (RAM) and computer components for network connections (Ethernet cards); and
3. installation of equipment and testing to assure network functioning with the Internet, although much of the actual wiring is expected to be done through Net Day volunteer efforts.

***School systems are expected to use BEP technology funding and local match for purchases of new computers.

Two Types of Grants

I. Connecting Students to the Internet
II. Professional Development

I. Connecting Students to the Internet

Estimated to use $2.8 million

Requirements for applicants

1. document current status toward meeting the objectives for 1997-98 (see template).
2. update technology plan including especially network connectivity and expenditures for technology through allocated Basic Education Plan (BEP) funding and local match.
3. explain school system's need and how the connectivity plan meets those needs.

Three likely scenarios of school need

1. One computer in the library connected; other computers in the building not connected. Proposal submitted to wire classrooms and connect them to the Internet. Upgrades are likely to be requested for the computers.

2. One computer in the library connected as well as other computers in the building; some computers not connected. Proposal submitted to wire additional classrooms and connect them to the Internet. Upgrades are likely to be requested for the computers.

3. All of the computers in the school are connected. There are not enough computers to provide one hour of access per student. Proposal for new computers and connections to the existing network. (The grant proposal would identify other funds to assist in purchasing computers.)

II. Professional Development

Estimated to use $425,000 for 50 modules

To develop curricular modules for use on the Web. This is not a competition to create web pages of content, but rather to use high quality sites already in existence. Teams or individuals may apply. Proposals may be submitted for more than one module. Funds would pay stipends as well as technical assistance.

Requirements of all applicants

1. Describe proposed curricular module for the Web including
   content,
   objectives that tie to the Tennessee curriculum frameworks,
   plan for student interactivity on the web and in the classroom,
   why this unit of content is conducive to the Web, and
   how existing high quality websites already available will be used.
2. Place module in a subject and age category

Competitive grants will be awarded between the two areas above, and these numbers represent desirable split among school based equipment and implementation versus teacher training materials.

Administrative Expenses

The Tennessee Department of Education expects to use up to 5% of this grant for administrative purposes. This will include technical assistance to develop a template and guidelines for upgrade and wiring of classrooms.

Tennessee Department of Education Homepage

http://www.state.tn.us/education

Tennessee's Plan

Mission

The mission of the Tennessee Department of Education is to advance student success by creating and supporting a dynamic, world-class system of teaching and learning for all Tennesseeans.

Vision

1. All Tennessee students will have Internet access to the world's libraries, databases, and content.
   Objective: Every Tennessee student and teacher will have access to the Internet for a minimum of one hour per week to use the Internet.
   Strategies: ConnecTEN, 21st century classroom, Basic Education program formula (BEP), Computer Refurbishing Program, Goals 2000, Grant Process I, Tennessee NetDay, Professional Development Programs*.

2. All Tennessee students and teachers will use technology resources to develop workforce relevant skills, perform research and solve problems.
   Objective: every Tennessee classroom will be wired to the Internet.
   Strategies: Tennessee NetDay, ConnecTEN, Professional Development Programs, School to Career, Tennessee Department of Education Web Page, TEN Network, various Department sponsored conferences with technology emphasis.

3. All Tennessee teachers will be prepared to use instructional technology, incorporating it effectively into the curriculum.
   Objective: Every teacher will have access to modules on the Internet to facilitate his/her professional development.
   Objective: Every teacher will have access to curricular modules to facilitate integrating the Internet into the curriculum.
   Strategies: ConnecTEN, Professional Development Programs, Grant Process II, Technology Coordinators, Tennessee Department of Education Web pages, Curricular Frameworks, TEN Network, various Department sponsored conferences with technology emphasis, extended contract program

4. All of Tennessee's communities will be reconnected to their schools through technology.
   Objective: Every Tennessee classroom wiring effort will involve volunteers and local businesses.
   Objective: Many state agencies will continue to refurbish computers and train teachers.
   Strategies: Tennessee NetDay, Computer Refurbishing Program, National Guard, Public/Private Partnerships, Connect Tennessee Students, Inc., Tennessee NetDay, School to Career, extended contract program, Tennessee Department of Education Webpage.

* Professional Development Program includes the following: TN Academies for School Leaders, School Board Academies, CEO Academies, Teacher Leadership Academies, various Study Council Academies, Statewide E-mail with TEN-NASH access and training, Internet Trainings, Armory Trainings. See Attachments

Components

Connectivity

TNII (Tennessee Network Information Infrastructure)
Statewide telecommunications network designed as the seed investment by the state for providing equitable electronic access to all Tennessee citizens by leveraging assets within the existing infrastructure.

TEN (Tennessee Electronic Network)
A statewide telecommunications network for K-12 schools providing dial-in, text-based access to the Internet to K-12 teachers via shell accounts.

21st Century Classrooms
A major initiative to bring technology to Tennessee K-12 schools by providing computers to thousands of educators across the state. Although this initiative did not emphasize network connectivity, it has left Tennessee schools well-positioned to take advantage of connectivity. Since 1996, this program has stressed connectivity.

Library-Internet Telecommunications Project
Provided microcomputers and accessibility to the Internet for all K-12 public school libraries and media centers. 1,943 librarians and media specialists were trained.

ConnecTEN
ConnecTEN is the opportunity for all 860,000 public school students in Tennessee to gain access to the world of resources available through a graphical connection to the Internet. These resources assure the opportunity to use converging technologies to connect anywhere in the world for resource gathering, problem solving, work-force preparedness and life-long learning. At a minimum, the school library in all 1,554 schools will be networked to connect to the Internet via ISDN line or equivalent (leased). All other computers in the school may also be connected as part of the same initiative, if they are connected on a network within the school (local area network). Using this building block approach, as more computers and a network within the school are available, they too will be connected to the world through the Internet. BellSouth, Sprint, and the other independent telephone companies in Tennessee waived all installation fees ($60) and agreed to low recurring rates for the schools' monthly service ($30).

Cost

BEP (Basic Education Program)
A comprehensive funding formula adopted by the Tennessee General Assembly for funding education. The BEP guarantees equitable distribution through a process called "equalization". This process divides the local share of the match among school systems based on differences in ability to raise local revenues. The BEP formula is approved by the Tennessee Supreme Court and adopted by the Tennessee General Assembly for funding education.

1. Legislative appropriation
   (a) $10 million recurring per year designated for 21st century computers and operational network costs for FY 97.
   (b) Basic Education Program (BEP) funding formula allocating an estimated $20 million in FY 98 for technology purposes.

2. Local Education Agency match to Legislative appropriation
   Match is defined by a formula of criteria that calculates the ability to provide local support. Overall, Tennessee's legislative appropriation is 75% with a local match of 25%.

3. Education is participating in a statewide network, TNII, with shared costs among other state government, local government and higher education entities.

4. The network designed and purchased for Tennessee public schools is predicated on low cost/low bandwidth digital service with recurring costs that are affordable in current state and local appropriations. Annual costs are $4 million with $3 million state share and $1 million local share.

5. Professional development strategies have been designed with low cost initial implementation such that all teachers can begin to use network technology and enhance their skill and capabilities over time.

6. Leveraging Other Sources
   (a) Goals 2000 dollars were awarded with preference to technology-based programs that enhanced network connectivity and use of technology.
   (b) School-to-Career initiative provides information including curriculum, Work Keys, best practices and career opportunities to the schools via the Internet. Grant dollars will go toward the development of a science/technology career cluster in each of the fourteen regions of the state.
   (c) Private donations from business have been pledged and collected to support initial network implementation in every school.
   (d) Grant proposals for government and foundation funding are designed to complement the technology plan.
   (e) In-kind contributions are accepted.

Community

1. Tennessee Network Information Infrastructure (TNII) is a joint planning effort across all state government departments, local government entities, public libraries, schools, and higher education to combine three existing statewide networks, and promote joint network use for all statewide connectivity.

2. Connect Tennessee Students, Inc. is a nonprofit organization created to obtain support for school network strategies from business and foundation sources. Funds have been committed by the Tennessee Association of Business, the Tennessee Business Roundtable, the Tennessee Bankers Association, Tennessee members of National Federation of Independent Business, etc., representing more than 25,000 large and small businesses in Tennessee.

3. Volunteer efforts such as NetDay 97 in Tennessee will focus on extending the existing network in each school to classrooms, incorporating parent and community volunteers to extend wiring, and business donations to support network connectivity and teacher professional development.

4. Agreements among Tennessee State Departments are furthering the availability of computers for network purposes:
   (a) The Tennessee prisons are cooperating in refurbishing obsolete equipment provided by businesses and government agencies. This program began with Vanderbilt University offering training and free Internet accounts through Virtual School. The teachers didn't have computers in their classroom so the Nashville Chamber of Commerce began a program to gather surplused computers from businesses and government and recruited volunteers to refurbish them at less than $5 a computer. When the Chamber dropped the project, Ingram Industries took over the project. Ingram involved the Department of Corrections by setting up a vocational training program for inmates. The inmates began to refurbish the computers. The Department of Corrections reports a 60% fix rate.
   (b) Tennessee General Services is providing coordination and transportation to equitably distribute equipment and teachers are volunteering to receive training to use the equipment.
   (c) Tennessee National Guard is providing space, training and technical support and in assisting teachers and schools to increase the number of operational networked computers.

Equitable Assistance

1. **Funding (BEP)**: Tennessee law established a funding formula guaranteeing equitable distribution of funding for all Tennessee schools systems, whether students live in rural or urban settings or high or low economic areas.

2. **Network Access**: Digital access has been assured by Tennessee's telephone companies with a $400 million statewide investment. Building on this infrastructure, Tennessee's statewide network placed an access point in every county (95) to assure low cost, local connections from any entity wanting access.

3. **Low Recurring costs**: At $30 per month per ISDN lines in schools and residences, Tennessee has one of the lowest digital line costs in the country. A strategy using this capacity facilitated a modest cost for every school to connect to the Internet. Every Tennessee telephone company, including independents and cooperatives, has provided digital access at this monthly rate for schools in Tennessee.

4. **Equal Opportunity for Teacher Training:**
   (a) Using National Guard armories, located in most counties, as well as higher education entities, has facilitated making training easily and quickly accessible to all Tennessee teachers. About 45% of Tennessee's teachers now have Internet E-mail accounts, with training, and this is available to any teacher desiring one. More than 2000 teachers and 17 technology coordinators were trained in Netscape installation and using Netscape during summer 1996 at the armories. Having one teacher minimum per school who is knowledgeable helps facilitate installation and training inside the school.
   (b) As of September 1997, all graduates of Tennessee teacher education institutions (public and private) are required to fulfil instructional technology requirements to receive licensure.
   (c) Plans for World Wide Web-based training are now part of the State Department of Education's training plans since all teachers now have access to the World Wide Web in their school.
   (d) Incentives for all teachers to use technology are also part of grants, awards and NetDay type volunteer activities.

5. **Technology Coordinators:** 217 state funded technology coordinators assist school systems in the area of technology including maintenance, networking and integrating curriculum. Every school system has a minimum of one, with Memphis City Schools (the largest system) employing 17. The number of technology coordinators is based on student enrollment.

Universal Access

Tennessee has removed the barrier of universal access with the ConnecTEN initiative. The ConnecTEN initiative dropped an ISDN line (or leased in some areas) in every school and connected, at a minimum, the computer from the Library-Internet Telecommunications Project.

Timeline

1991	Virtual School with Vanderbilt and Oak Ridge National Lab begins with the Tennessee Education Network (TEN) Computer Refurbishing Project begins
1993	21st Century Classrooms program begins
1994	7500 teachers trained through Virtual School and Vanderbilt The TNII proposal for a statewide network is submitted Management of TEN (including all shell accounts) transitioned to Tennessee Board of Regents Virtual School receives NII Award
1995 July 1995	Library-Internet Telecommunications Project deployed Governor Don Sundquist and Commissioner of Education Jane Walters announce the ConnecTEN vision at BellSouth Conference
August 1995	Vanderbilt provides expertise in Linking Tennessee lesson plans
September 1995	Training 217 Technology Coordinators at nine sites across the state (both UT system and TBR provided trainers and locations). Tech Coordinators are given PPP accounts for practice until ConnecTEN initiative complete.
November 1995	Goals 2000 grants are announced with connectivity emphasis
February 1996	217 ConnecTEN teams chosen from a competition. Teams are comprised two teachers, one administrator, one system employee with curricular responsibilities, and one board member. Teams given PPP accounts and trained by local technology coordinator to participate in Linking Tennessee, a bicentennial telecurricular project.
March 1996	Tech Coordinators train ConnecTEN teams in system
March-May 1996	Linking Tennessee projects underway
July 1996	ConnecTEN Team celebration (sponsored by Department and Vanderbilt)
May 1996-ongoing	95 TAPs installation (Tennessee access points; one per county) begins; ISDN and network equipment installation begins
June 1996	Tennessee Home Page unveiled by Governor Sundquist; all state departments required to have homepages
July/August 1996	National Guard Armory Training for K-12 teachers; more than 2000 teachers and 217 technology coordinators trained in installation of Netscape and given disks for installation.
October 10, 1996	ConnecTEN celebration to launch web access in all K-12 schools. Main celebration in Nashville with Governor Sundquist as well as every school system's celebration. 60% of schools are connected.
November 1996	Tech Quest Conference for Technology Coordinators for update and more training. Help Desk opens.
February 1997	98.7% of schools connected
March 1997	Tennessee Education Technology Conference Tennessee NetDay Rollout TEN management transitioned to State Department of Education from Tennessee Board of Regents

Public and Private Education Partners

Appalachian Education Laboratory
Apple Computers
Ardmore Telephone
BellSouth
Ben Lomand Telephone
Bledsoe Telephone
Cabletron
Century Telephone
Citizens Telephone
Connect Tennessee Students, Inc.
Crockett County Telephone
DeKalb Telephone
Highland Telephone
Humphreys Telephone
Lockheed Martin
Millington Telephone
NCR
Nippondenso
North Central Co-op
Office of Information Resources (part of Department of Finance and Administration)
People's Telephone
Telecom Telephone
Tellico
Tennessee Board of Regents
Tennessee National Guard
Tennessee Bankers Association
Tennessee Telephone
Tennessee General Assembly
Tennessee Business Roundtable
Tennessee's School Systems
University of Tennessee System
Vanderbilt University
West Kentucky Rural Telephone
Yorkville Telephone

GRANT PROCESS for TECHNOLOGY LITERACY FUND

Objectives

1. Every Tennessee classroom will be wired to the Internet.
2. Every Tennessee student will have a minimum of 1 hour per week to use the Internet.
3. Every teacher will have access to modules on the Internet to facilitate his/her professional development.
4. Every teacher will have access to curricular modules to facilitate integrating the Internet into the curriculum.
5. Every Tennessee classroom will incorporate volunteers and local businesses in wiring.
6. Many state agencies will continue to refurbish computers and train teachers.

Purpose

1. Every school system in the state will bring student Internet access to a minimum of 1 hour per week:
   (c) by having 1 computer available for every 25 students in each school, and
   (d) by having those computers connected to the internet through the existing ConnecTEN network and available for student access.

   Example: 100 students @ 1 hr. per week requires 100 hours of available computer time. If there are 4 computers available 6 hours per school day and 5 hours per week, this allows 100 hours for student access (1 hr. per week) and 20 hours for administrative access per week.
3. Every teacher will have access to curricular modules available on the Web for use in the classroom.

Emphasis

Since Tennessee, through legislative authorization and local school system match, has, in the last several years, spent $145,000,000 providing funds for over 16,000 21st century computers, the priority for funding will be to enhance these to support connectivity by the Internet through:

1. equipment hubs (Ethernet hubs) and wiring to create a physical network connection among existing computers in the schools;
2. upgrades to existing computers to provide sufficient memory (RAM) and computer components for network connections (Ethernet cards); and
3. installation of equipment and testing to assure network functioning with the Internet, although much of the actual wiring is expected to be done through Net Day volunteer efforts.

***School systems are expected to use BEP technology funding and local match for purchases of new computers.

Two Types of Grants

I. Connecting Students to the Internet
II. Professional Development

I. Connecting Students to the Internet

Estimated to use $2.8 million

Requirements for applicants

1. document current status toward meeting the objectives for 1997-98 (see template)
2. update technology plan including especially network connectivity and expenditures for technology through allocated Basic Education Plan (BEP) funding and local match.
3. explain school system's need (see template) and how the connectivity plan meets those needs.

Need

Need is defined in terms of classroom connectivity, not poverty in the school system or whether the system is urban or rural. In Tennessee, the BEP formula has equalized many of the opportunities afforded to the "poorer" or more rural systems. Need, in terms of classroom connectivity, will be expressed in the template.

Three likely scenarios of school need

1. One computer in the library connected; other computers in the building not connected. Proposal submitted to wire classrooms and connect them to the Internet. Upgrades are likely to be requested for the computers.
2. One computer in the library connected as well as other computers in the building; some computers not connected. Proposal submitted to wire additional classrooms and connect them tot he Internet. Upgrades are likely to be requested for the computers.
3. All of the computers in the school are connected. There are not enough computers to provide one hour of access per student. Proposal for new computers and connections to the existing network. (The grant proposal would identify other funds to assist in purchasing computers.)

II. Professional Development

Estimated to use $425,000 for 50 modules

To develop curricular modules for use on the Web. This is not a competition to create web pages of content, but rather to use high quality sites already in existence. Teams or individuals may apply via their school systems by sending in their plan for a curricular module. Proposals may be submitted for more than one module. Funds will pay stipends as well as technical assistance.

Requirements of all applicants

1. Describe proposed curricular module for the Web including
   - Content,
   - Objectives that tie to the Tennessee curriculum frameworks,
   - Plan for student interactivity on the web and in the classroom,
   - Why this unit of content is conducive to the Web, and
   - How existing high quality web sites already available will be used.
2. Place module in a subject and age category

Competitive grants will be awarded between the two areas above, and these numbers represent desirable split among school based equipment and implementation versus teacher training materials.

Administrative Expenses

The Tennessee Department of Education expects to use up to 5% of this grant for administrative purposes. This will include technical assistance to develop a template and guidelines for upgrade and wiring of classrooms.

Rough Draft Template for Grant Type I--Connecting Students to the Internet					
should establish need and budget					
Fill out one spreadsheet per school					
Name of School					
Total Enrollment of Students					
Total Number of Classrooms in the school					
Number of computers need to have one per 25 students					
**Libraries should be counted as classrooms					
		Existing	Proposed with TLC funds	Proposed with other funds (BEP)	Totals
Number of Classrooms wired					0
Number of Computers for Internet access in school					0
Number of Computers networked					0
Number of Hubs (based on distance and floors)					0
Number of existing Computers requiring RAM					0
Number of existing Computers requiring Ethernet cards					0
Need met by TLC funds		**Cost**	**TOTAL**		
Number of classrooms to be wired	0	$100	$ -		
Number of existing Computers requiring RAM	0	$225	$ -		
Number of existing Computers requiring Ethernet cards	0	$100	$ -		
Number of Hubs needed	0	$400	$ -		
	TOTAL TLC funds		$ -		
Need met by other funds	0				
Number of classrooms to be wired	0				
Number of existing Computers requiring RAM	0				
Number of existing Computers requiring Ethernet cards	0				
Number of Hubs needed	0				
Number of new computers	0				
This template is missing the section on wiring specifications					